REMARKS

This is a full and timely response to the non-final Office Action of April 2, 2004. Reexamination, reconsideration, and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this Fourth Response, claims 1-14, 16, 17, and 19-43 are pending in this application. Claim 21 is directly amended herein, and claims 38-43 are newly added. It is believed that the foregoing amendments add no new matter to the present application.

Response to §103 Rejections

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g.*, *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). In addition, "(t)he PTO has the burden under section 103 to establish a prima facie case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §103 as purportedly unpatentable over *Firester* (U.S. Patent No. 6,611,241) in view of *Molnar* (PixelFlow: High-Speed Rendering using Image Composition). However, in order for a claim to be properly rejected under 35 U.S.C. §103 based on a combination of references, "(t)here must be some reason, suggestion, or motivation found ***in the prior art*** whereby a person of ordinary skill in the filed of the invention would make the combination." *In re Oetiker*, 977 F.2d 1443, 1447, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992) (emphasis added). Applicants respectfully assert that the cited art fails to provide a sufficient motivation for combining *Firester* and *Molnar*, and such an alleged combination is, therefore, improper.

In this regard, it is alleged in the Office Action that:

> "It would have been obvious to one of ordinary skill in the art a the time the present invention was made to combine the teachings of Molnar into the system of Firester in order to provide a high speed image generation system (that) uses high performance image composition network to produce an image in real time as taught by Molnar."

The alleged "high speed" achieved by *Molnar* appears to emanate from the fact that *Molnar* uses multiple "geometry processors" to render different portions of a single image. However, such a concept appears to be included in the *Firester* system. In particular, *Firester* teaches that image processors IP1, IP2, IP3, and IP4 respectively render different portions of the same image. See Figure 2, Abstract, and column 4, lines 23-42. Thus, when *Molnar* and *Firester* are properly viewed as whole, it becomes apparent that these references fail to provide a sufficient motivation for combining the teachings of *Molnar* with the teachings of *Firester*. "Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application for a showing of the teaching or motivation to

combine prior art references." *In re Dembiczcak*, 175 F.3d 994, 50 U.S. P.Q.2d 1614, 1617 (Fed. Cir. 1999).

Additionally, where there is no apparent disadvantage present in a particular prior art reference, then generally there can be no motivation to combine the teaching of another reference with the particular prior art reference. *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 53 U.S.P.Q.2d 1580 (Fed. Cir. January 27, 2000). The Office Action fails to cite any apparent disadvantage of *Firester* which would prompt the combination of select teachings of *Molnar* therewith.

For at least the reasons set forth above, Applicants respectfully submit that the alleged combination of *Firester* and *Molnar* is improper, and the 35 U.S.C. §103 rejection of pending claim 1 should, therefore, be withdrawn.

Claims 2-6, 16, 17, 26-30, and 38-40

Claims 2-4, 16, 17, and 26-30 presently stand rejected under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. Further, claims 38-40 have been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 2-6, 16, 17, 26-30, and 38-40 contain all features of their respective independent claim 1. Since claim 1 should be allowed, as argued hereinabove, pending dependent claims 2-6, 16, 17, 26-30, and 38-40 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features and/or combinations of features that make them allowable, notwithstanding the allowability of their base claim 1.

As an example, claim 2 reads as follows:

> 2. The system of claim 1, wherein:
> ***said first graphical pipeline is configured to mathematically combine a first offset with coordinate values*** included in said graphical data rendered by said first graphical pipeline;
> ***said second graphical pipeline is configured to mathematically combine a second offset with coordinate values*** included in graphical data rendered by said second graphical pipeline; and
> ***said compositor is configured to blend color values associated with corresponding coordinate values within said graphical data rendered by said first and second graphical pipelines***. (Emphasis added).

Applicants respectfully assert that the cited art fails to suggest at least the features of claim 2 highlighted hereinabove. In particular, there is nothing in *Firester* to indicate that the "image processors" IP1, IP2, IP3, and IP4 combine "offsets" to the coordinate values of graphical data being rendered by these "image processors," and there is nothing in *Molnar* to indicate that "geometry processors" combine "offsets" to the coordinate values of graphical data being rendered by these "geometry processor." Thus, the alleged combination of *Firester* and *Molnar* fails to suggest each feature of pending claim 2, and the 35 U.S.C. §103 of claim 2 should be withdrawn, notwithstanding the allowability of independent claim 1.

Further, claim 17 presently reads as follows:

> 17. The system of claim 2, ***wherein said first and second graphical pipelines, by respectively combining said first and second offsets with coordinate values*** in said graphical data rendered by said first and second graphical pipelines, ***offsets an image defined by said graphical data rendered by said first graphical pipeline with respect to an image defined by said graphical data rendered by said second graphical pipeline such that said compositor defines a jitter enhanced image by blending said color values***. (Emphasis added).

Applicants respectfully assert that the cited art fails to suggest at least the features of claim 17 highlighted hereinabove. Indeed, it does not appear that the Office Action even alleges that the highlighted features of claim 17 are suggested by the cited art. Thus, the Office Action fails to

establish a *prima facie* case of obviousness with respect to claim 17, and the 35 U.S.C. §103 rejection of this claim should be withdrawn, notwithstanding the allowability of claim 1.

Claim 28 presently reads as follows:

> 28. The system of claim 1, wherein said graphical command defines an image to be displayed by said one display device interfaced with said compositor, and ***wherein said graphical data rendered by said first graphical pipeline entirely defines said image to be displayed by said one display device interfaced with said compositor***. (Emphasis added).

Applicants respectfully submit that *Molnar* teaches against at least the features of claim 28 highlighted hereinabove and, therefore, should be not be used to reject this claim under 35 U.S.C. §103.

In this regard, each of the "geometry processors" in *Molnar* renders only a portion of the image to be displayed and, in particular, does not render the entire image to be displayed. Such a configuration teaches against the recited claim elements where a "first graphical pipeline" and a "second graphical pipeline" are both interfaced with a "compositor" that is also interfaced with a "display device," wherein the "graphical data rendered by said first graphical pipeline ***entirely defines*** said image to be displayed" by the display device. (Emphasis added). Thus, upon reading *Molnar*, one of ordinary skill in the art would be discouraged from following the path taken by Applicants, and Applicants submit that it is improper to use *Molnar* to reject pending claim 28 under 35 U.S.C. §103. A reference "teaches away" from the claimed invention and should not be used to reject the claimed invention under 35 U.S.C. §103 "when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 2 F.3d 551, 31 U.S.P.Q.2d 1130, 1131 (Fed. Cir. 1994).

For at least the above reasons Applicants respectfully submit that the 35 U.S.C. §103 rejection of claim 28 should be withdrawn, notwithstanding the allowability of claim 1.

Claim 7

Claim 7 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants respectfully assert that the alleged combination of *Firester* and *Molnar* is improper. Accordingly, the rejection of claim 7 under 35 U.S.C. §103 should be withdrawn.

Claims 8-10 and 31

Claims 8-10 and 31 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. Applicants submit that the pending dependent claims 8-10 and 31 contain all features of their respective independent claim 7. Since claim 7 should be allowed, as argued hereinabove, pending dependent claims 8-10 and 31 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 11

Claim 11 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants respectfully assert that the alleged combination is improper. Accordingly, the rejection of claim 11 under 35 U.S.C. §103 should be withdrawn.

Claims 12-14, 19, 20, 32, 41, and 42

Claims 12-14, 19, 20, and 32 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. Further, claims 41 and 42 have been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 12-14, 19, 20, 32, 41, and 42 contain all features of their respective independent claim 11. Since claim 11 should be allowed, as argued hereinabove, pending dependent claims 12-14, 19, 20, 32, 41, and 42 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features and/or combinations of features that make them allowable, notwithstanding the allowability of their base claim 11.

For example, claim 12 recites "wherein said rendering further comprises mathematically combining different offsets with coordinate values included in said graphical data from said single graphical command." For at least the reasons set forth hereinabove in the arguments for allowance of claim 2, Applicants assert that the foregoing features of claim 12 are not suggested by the cited art. Accordingly, the 35 U.S.C. §103 of claim 12 should be withdrawn, notwithstanding the allowability of claim 11.

In addition, claim 20 recites the "method of claim 12, wherein said combining causes said compositing to jitter enhance said image." Applicants respectfully assert that the cited art fails to suggest at least the foregoing features of claim 20. Indeed, it does not appear that the Office Action even alleges that the features of claim 20 are suggested by the cited art. Thus, the Office Action fails to establish a *prima facie* case of obviousness with respect to claim 20, and the 35 U.S.C. §103 rejection of this claim should be withdrawn, notwithstanding the allowability of claim 11.

Claim 21

Claim 21 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants respectfully assert that the alleged combination is improper. Accordingly, the rejection of claim 21 under 35 U.S.C. §103 should be withdrawn.

Claims 22-24, 33-36, and 43

Claims 22-24 and 33-36 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. Further, claim 43 has been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 22-24, 33-36, and 43 contain all features of their respective independent claim 21. Since claim 21 should be allowed, as argued hereinabove, pending dependent claims 22-24, 33-36, and 43 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features and/or combinations of features that make them allowable, notwithstanding the allowability of their base claim 21.

For example, claim 22 reads as follows:

> "The system of claim 21, wherein each of said plurality of graphical pipelines of said one graphical acceleration unit is configured to mathematically combine a different offset to corresponding coordinate values of graphical data defining said three-dimensional graphical object ***such that said compositor of said one graphical acceleration unit jitter enhances said three-dimensional graphical object.***" (Emphasis added).

Applicants respectfully assert that the cited art fails to suggest at least the foregoing features of claim 22. Indeed, it does not appear that the Office Action even alleges that the features of claim 22 are suggested by the cited art. Thus, the Office Action fails to establish a *prima facie*

case of obviousness with respect to claim 22, and the 35 U.S.C. §103 rejection of this claim should be withdrawn, notwithstanding the allowability of claim 21.

Claim 25

Claim 25 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants respectfully assert that the alleged combination is improper. Accordingly, the rejection of claim 25 under 35 U.S.C. §103 should be withdrawn.

Claim 37

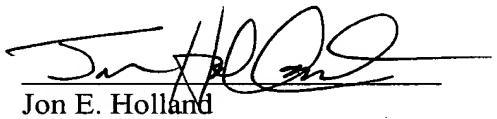
Claim 37 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Firester* in view of *Molnar*. Applicants submit that the pending dependent claim 37 contains all features of its independent claim 25. Since claim 25 should be allowed, as argued hereinabove, pending dependent claim 37 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

By: 

Jon E. Holland
Reg. No. 41,077
(256) 704-3900 Ext. 103

Hewlett-Packard Development Company, L.P.
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400